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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/506,553

10/06/2004

Nicolai Papke

05587-00368-US

1658

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7590

08/31/2007

CONNOLLY BOVE LODGE & HUTZ, LLP

P O BOX 2207

WILMINGTON, DE 19899

EXAMINER

TOSCANO, ALICIA

ART UNIT

PAPER NUMBER

1712

MAIL DATE

DELIVERY MODE

08/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/506,553	Applicant(s) PAPKE, NICOLAI	
	Examiner Alicia M. Toscano	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-2,7,9-11 and 15-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2,7,9-11 and 15-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
2. Claim 7 recites the limitation "the impact modifier" in the second line. There is insufficient antecedent basis for this limitation in the claim.
3. Examiner believes said claim is meant to either be cancelled or to depend from Claim 1 and will continue the rejection of said claim over Natarajan as set forth previously and below.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyawaki (JP 06240105) in view of Linder (US 4683267).

Miyawaki includes elements of the invention as discussed in the action dated 10/23/06. The esterification catalyst is disclosed to be triethylamine and the like [0006]. Miyawaki does not include the use of the catalysts in Claim 1.

Lindner disclosed molding compositions. Said compositions comprise a esterification catalyst such as triethylamine, butyl titanate and the like (Column 5 Lines 54-56).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Miyawaki the use of butyl titanate, as taught by Linder, as it is recognized in the art as being functionally equivalent to triethylamine.

Miyawaki does not disclose the use of between 0.00001 to 0.005 wt% catalyst. Linder discloses the use of 0.001-0.03 pph of catalyst and further discloses that smaller quantities of catalyst may be sufficient if the starting materials contain no basic impurities when an acid catalyst is used and no acid impurities when basic catalysts are used (Column 5 lines 57-64). Linder discloses that the quantity of catalyst is preferably as small as possible in order to avoid coloring the product.

It would have been obvious to one of ordinary skill in the art at the time of the invention to decrease the amount of catalyst in Miyawaki, as taught by Linder, in order to avoid coloring the product. Use of 0.001 meets the range requirements of Claims 1 and 27.

2. Claims 1 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyawaki and Linder in view of Yabuta (US 5889115).

Miyawaki and Linder include elements of the invention as set forth above and in the actions dated 10/23/06. The esterification catalyst is disclosed to be triethylamine and the like [0006]. Miyawaki does not include the use of the catalysts in Claim 1.

Yabuta discloses coating compositions. Said compositions comprise a catalyst such as triethylamine, tetrabutylphosphonium bromide and the like (Column 8 Lines 27-29).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Miyawaki and Linder the use of tetrabutylphosphonium bromide, as taught by Yabuta, as it is recognized in the art as being functionally equivalent to triethylamine. The catalyst amount of 0.001 as set forth in Miyawaki v. Linder above meets the requirements of the claims.

3. Claims 1 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyawaki and Linder in view of Bederke (US 5426156).

Miyawaki and Linder include elements of the invention as set forth above. The esterification catalyst is disclosed to be triethylamine and the like [0006]. Miyawaki does not include the use of the catalysts in Claim 1.

Bederke discloses compositions for surface coatings. Said coatings comprise catalysts such as triethylamine, triphenylphosphine and the like (Column 5 Lines 2-8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Miyawaki and Linder the use of triphenylphosphine, as taught by Bederke, as it is recognized in the art as being functionally equivalent to triethylamine. The catalyst amount of 0.001 as set forth in Miyawaki v. Linder above meets the requirements of the claims.

Art Unit: 1712

4. Claims 1, 2, 7, 11 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan (US 4480071) in view of Linder (US 4683267).

Natarajan includes elements of the invention as discussed in the action dated 10/23/06. The esterification catalyst is disclosed to be triethylamine and the like (Column 8 Line 12-13). Natarajan does not include the use of the catalysts in Claim 1.

Lindner disclosed molding compositions. Said compositions comprise a esterification catalyst such as triethylamine, butyl titanate and the like (Column 5 Lines 54-56).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Natarajan the use of butyl titanate, as taught by Linder, as it is recognized in the art as being functionally equivalent to triethylamine.

Natarajan does not disclose the use of between 0.00001 to 0.5 wt% catalyst. Linder discloses the use of 0.001-0.03 pph of catalyst and further discloses that smaller quantities of catalyst may be sufficient if the starting materials contain no basic impurities when an acid catalyst is used and no acid impurities when basic catalysts are used (Column 5 lines 57-64). Linder discloses that the quantity of catalyst is preferably as small as possible in order to avoid coloring the product.

It would have been obvious to one of ordinary skill in the art at the time of the invention to decrease the amount of catalyst in Natarajan, as taught by Linder, in order to avoid coloring the product. Use of 0.001 meets the range requirements of the claims.

Art Unit: 1712

5. Claims 1, 2, 7, 11, 15, 16 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan and Linder in view of Yabuta (US 5889115).

Natarajan and Linder include elements of the invention as discussed in the action dated 10/23/06 and as set forth above. The esterification catalyst is disclosed to be triethylamine and the like (Column 8 Line 12-13). Natarajan does not include the use of the catalysts in Claim 1.

Yabuta discloses coating compositions. Said compositions comprise a catalyst such as triethylamine, tetrabutylphosphonium bromide and the like (Column 8 Lines 27-29).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Natarajan and Linder the use of tetrabutylphosphonium bromide, as taught by Yabuta, as it is recognized in the art as being functionally equivalent to triethylamine. The catalyst amount of 0.001 as set forth in Natarajan v. Linder above meets the requirements of the claims.

6. Claims 1, 2, 7, 11, 15, 17 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan and Linder in view of Bederke (US 5426156).

Natarajan and Linder include elements of the invention as discussed in the action dated 10/23/06 and as set forth above. The esterification catalyst is disclosed to be triethylamine and the like (Column 8 Line 12-13). Natarajan does not include the use of the catalysts in Claim 1.

Bederke discloses compositions for surface coatings. Said coatings comprise catalysts such as triethylamine, triphenylphosphine and the like (Column 5 Lines 2-8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Natarajan and Linder the use of triphenylphosphine, as taught by Bederke, as it is recognized in the art as being functionally equivalent to triethylamine. The catalyst amount of 0.001 as set forth in Natarajan v. Linder above meets the requirements of the claims.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan and Linder in view of Bederke or Yabuta in further view of Sharma (US 6090319).

Natarajan, Linder, Bederke, and Yabuta include elements of the invention as discussed above. Natarajan, Bederke, Yabuta and Linder do not include the use of a glass fiber bundle which has been impregnated with a polyacetal resin and then bonded to a second component.

Sharma discloses a method for coating fibers. Said method comprises step (c) impregnating fiber strands with a first thermoplastic resin material to produce a long fiber reinforcing composite structure and (g) coating said long impregnated fiber with a second thermoplastic resin material, wherein the first and second thermoplastic resin materials are bonded at the first and second thermoplastic resin material interface (Column 2 Lines 31-65). The first thermoplastic resin can be a polyacetal (Column 5

Art Unit: 1712

Line 20). Said method improves the adhesion between the fibers and the first thermoplastic resin.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Natarajan, Linder and Bederke or Yabuta the method taught by Sharma to coat said fibers to improve the adhesion between the fibers and the first thermoplastic resin in order to have a composition with superior properties.

Conclusion

Response to Arguments

8. Applicant argues Miyakawaki states that when there are too few amounts of catalysts, a reaction cannot fully progress and effectiveness of this invention cannot be acquired, and as such Miyakawaki teaches away from the newly amended Claimed ranges. Examiner disagrees. In view of Linder, who teaches the desirability to use as little catalyst as possible, and who teaches that very small amounts may be used if the composition does not possess high amounts of impurities, the use of the range of Linder is obvious.

9. Applicant argues Natarajan teaches away from the claimed catalysts because Natarajan discloses 81 catalytic options. Examiner disagrees. Natarajan discloses butyl titanate. Though it is one of 81 options, this is still a teaching that butyl titanate is a viable option. The functional equivalent rejection is proper and thusly stands.

Double Patenting

4. The double patenting rejection over copending Application No. 10/506541 (now US Pat 7169887) view of Laughner (US 5286790) stands.

Remarks:

Applicants argues that “applicant does not believe Laughner is combinable with ‘541” and for that reason the double patenting rejection should be withdrawn. Examiner disagrees. Laughner teaches the functional equivalence of the resins. Thusly use of Laughner is proper and the rejection stands.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Toscano whose telephone number is 571-272-2451. The examiner can normally be reached on Monday to Friday 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMT


RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700